

Patent Application No. 09/338,035

REMARKS

This Amendment is in response to the Office Action dated August 23, 2004. In the Office Action, claims 1-10 were rejected under 35 USC §112 and claims 1-18 were rejected under 35 USC §103. By this Amendment, claims 1, 8 and 9 are amended. Currently pending claims 1-18 are believed allowable, with claims 1, 8, 9, 11, and 15 being independent claims.

AMENDMENT TO THE SPECIFICATION:

Please update the file record to reflect the new Attorney Docket Number GB919990026US1 for the present Application.

CLAIM REJECTIONS UNDER 35 USC §112:

Claims 1-10 were rejected under 35 USC §112 as being indefinite. Specifically, claims 1, 8 and 9 were rejected for containing the term "in order" without specifying the type of order. By this Amendment, claims 1, 8 and 9 are amended to recite processed out of sequential order. Support for these amendments can be found at least at page 7, lines 19-26 of the present Application.

CLAIM REJECTIONS UNDER 35 USC §103:

Claim 11

Claim 11 of the pending Application stands rejected as obvious over U.S. Patent No. 5,745,778 to Alfieri ("Alfieri"). Office Action, paragraph 3. A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143.

Claim 11 recites a method for scheduling tasks that includes, "determining if the task queue includes a cached task that requires the same code to process the cached task and the new task." Application, claim 11, lines 4-5.

According to Alfieri, a "thread group" is a set of closely related threads within a process that tend to access and operate on the same data. Alfieri, col. 2, lines 61-63. Thus, Alfieri does not discuss grouping threads according to common code processing, but rather according to common

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data processing. For example, the same code may access and operate on completely different data if dynamic data addressing is utilized.

Moreover, claim 11 recites, "batching the new task with the cached task if the task queue includes the cached task that requires the same code to process the cached task and the new task." Application, claim 11, lines 6-8.

In contrast to claim 11, Alfieri does not appear to teach or suggest an operation to determine if a thread should be a member of an existing thread group. Whether or not a thread should be a member of an existing group or start its own thread group is delegated to the user. Alfieri, col. 4, lines 8-14.

For at least these reasons, it is respectfully submitted that Alfieri fails to make the limitations of claim 11 obvious. Furthermore, none of the cited documents, either alone or in combination, teach or suggest all the limitations of claim 11. Thus, claim 11 is believed allowable and indication of such allowance is earnestly requested.

Claim 13

Claim 13 of the pending Application stands rejected as obvious over Alfieri. Office Action, paragraph 3. A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143.

Claim 13 is dependent on and further limits claim 11. Claim 13 recites, "executing the task code for processing the new task in the instruction cache without loading new code into the instruction cache." Application, claim 13, lines 7-8.

It is respectfully submitted that Alfieri does not teach or suggest executing task code for processing a new task in an instruction cache without loading new code into the instruction cache. Alfieri is concerned with grouping threads accessing and operating on the same data, not program code. As mentioned above, Alfieri describes a "thread group" as a set of closely related threads within a process that tend to access and operate on the same data (although no method for determining whether threads access or operate on the same data appears to be disclosed). Alfieri, col. 2, lines 61-63.

For at least this reason, and the reasons discussed for claim 11, it is respectfully submitted that Alfieri fails to make the limitations of claim 13

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obvious. Furthermore, none of the cited documents, either alone or in combination, teach or suggest all the limitations of claim 13. Claim 13 is therefore believed allowable and indication of such allowance is earnestly requested.

Claims 12 and 14

Claims 12 and 14 are dependent on and further limit claim 11. Since claim 11 is believed allowable, claims 12 and 14 are also believed allowable for at least the same reasons as claim 11.

Claim 15

Claim 15 of the pending Application stands rejected as obvious over Alfieri. Office Action, paragraph 3. A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143.

Claim 15 recites computer readable program codes configured to cause a program to, "determine if the task queue includes a cached task that requires the same code to process the cached task and the new task." Application, claim 15, lines 7-8.

According to Alfieri, a "thread group" is a set of closely related threads within a process that tend to access and operate on the same data. Alfieri, col. 2, lines 61-63. Thus, Alfieri does not discuss grouping threads according to common code processing, but rather according to common data processing. For example, the same code may access and operate on completely different data if dynamic data addressing is utilized.

Moreover, Alfieri does not appear to teach or suggest an operation to determine if a thread should be a member of an existing thread group. Whether or not a thread should be a member of an existing group or start its own thread group is delegated to the user. Alfieri, col. 4, lines 8-14.

In contrast to Alfieri, claim 15 recites, "batch the new task with the cached task if the task queue includes the cached task that requires the same code to process the cached task and the new task." Application, claim 15, lines 9-11.

For at least these reasons, it is respectfully submitted that Alfieri fails to make the limitations of claim 15 obvious. Furthermore, none of the cited documents, either alone or in combination, teach or suggest all the

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limitations of claim 15. Thus, claim 15 is believed allowable and indication of such allowance is earnestly requested.

Claim 17

Claim 17 of the pending Application stands rejected as obvious over Alfieri. Office Action, paragraph 3. A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143.

Claim 17 is dependent on and further limits claim 15. Claim 17 recites, "execute the task code for processing the new task in the instruction cache without loading new code into the instruction cache." Application, claim 17, lines 8-9.

It is respectfully submitted that Alfieri does not teach or suggest executing task code for processing a new task in an instruction cache without loading new code into the instruction cache. Alfieri is concerned with grouping threads accessing and operating on the same data, not program code. As mentioned above, Alfieri describes a "thread group" as a set of closely related threads within a process that tend to access and operate on the same data (although no method for determining whether threads access or operate on the same data appears to be disclosed). Alfieri, col. 2, lines 61-63.

For at least this reason, and the reasons discussed for claim 15, it is respectfully submitted that Alfieri fails to make the limitations of claim 17 obvious. Furthermore, none of the cited documents, either alone or in combination, teach or suggest all the limitations of claim 17. Thus, claim 17 is believed allowable and indication of such allowance is earnestly requested.

Claims 16 and 18

Claims 16 and 18 are dependent on and further limit claim 15. Since claim 15 is believed allowable, claims 16 and 18 are also believed allowable for at least the same reasons as claim 15.

Claim 1

Claim 1 of the pending Application stands rejected as obvious over Alfieri. Office Action, paragraph 3. A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143.

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Claim 1 recites a method including the operation of "placing the tasks of the same task type into a batch such that the tasks in a batch are processed before processing the next ordered task; . . . wherein the tasks of the same task type use same code in the instruction cache." Application, claim 1, lines 7-11.

According to Alfieri, a "thread group" is a set of closely related threads within a process that tend to access and operate on the same data. Alfieri, col. 2, lines 61-63. Thus, Alfieri does not discuss grouping threads according to common code, but rather according to common data processing. For example, the same code may access and operate on completely different data if dynamic data addressing is utilized.

For at least this reason, it is respectfully submitted that Alfieri fails to make the limitations of claim 1 obvious. Furthermore, none of the cited documents, either alone or in combination, teach or suggest all the limitations of claim 1. Claim 1 is therefore believed allowable and indication of such allowance is earnestly requested.

Claim 2

Claim 2 of the pending Application stands rejected as obvious over Alfieri. Office Action, paragraph 3. A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143.

Claim 2 is dependent on and further limits claim 1. Claim 2 recites, in part, "determination that there is a further task of like type in the batch, executing the loaded code to process the further task." Application, claim 2, lines 4-7.

It is respectfully submitted that Alfieri does not teach or suggest determining if there is a further task of like type in a batch, and further executing already loaded code to process this task. Alfieri is concerned with grouping threads accessing and operating on the same data, not program code. As mentioned above, Alfieri describes a "thread group" as a set of closely related threads within a process that tend to access and operate on the same data (although no method for determining whether threads access or operate on the same data appears to be disclosed). Alfieri, col. 2, lines 61-63.

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Although the Office Action cites Alfieri at col. 3, lines 29-37, it is respectfully submitted that whether a thread group is characterized as either a realtime group or a timesharing group, is not material to determining if there is a further task of like type in a batch, and further executing already loaded code to process this task. Similarly, the Abstract of Alfieri does not appear to teach or suggest such claim limitations.

For at least this reason, and the reasons discussed for claim 1, it is respectfully submitted that Alfieri fails to make the limitations of claim 2 obvious. Furthermore, none of the cited documents, either alone or in combination, teach or suggest all the limitations of claim 2. Thus, claim 2 is believed allowable and indication of such allowance is earnestly requested.

Claims 3-7

Claims 3-7 are dependent on and further limit claim 1. Since claim 1 is believed allowable, claims 3-7 are also believed allowable for at least the same reasons as claim 1.

Claim 8

Claim 8 of the pending Application stands rejected as obvious over Alfieri. Office Action, paragraph 3. A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143.

Claim 8 recites a computer program product including "code means for scheduling tasks of the same type into a batch such that tasks in a batch are processed before processing the next ordered task, wherein the tasks of the same type use the same program code." Application, claim 8, lines 9-12.

According to Alfieri, a "thread group" is a set of closely related threads within a process that tend to access and operate on the same data. Alfieri, col. 2, lines 61-63. Thus, Alfieri does not discuss grouping threads according to common code, but rather according to common data processing. For example, the same code may access and operate on completely different data if dynamic data addressing is utilized.

For at least this reason, it is respectfully submitted that Alfieri fails to make the limitations of claim 8 obvious. Furthermore, none of the cited documents, either alone or in combination, teach or suggest all the

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limitations of claim 8. Thus, claim 8 is believed allowable and indication of such allowance is earnestly requested.

Claim 9

Claim 9 of the pending Application stands rejected as obvious over Alfieri. Office Action, paragraph 3. A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143.

Claim 9 recites a data processing apparatus including "means for scheduling tasks of the same type into a batch, . . . wherein the tasks of the same type use the same program code." Application, claim 9, lines 9-11.

According to Alfieri, a "thread group" is a set of closely related threads within a process that tend to access and operate on the same data. Alfieri, col. 2, lines 61-63. Thus, Alfieri does not discuss grouping threads according to common code, but rather according to common data processing. For example, the same code may access and operate on completely different data if dynamic data addressing is utilized.

For at least this reason, it is respectfully submitted that Alfieri fails to make the limitations of claim 9 obvious. Furthermore, none of the cited documents, either alone or in combination, teach or suggest all the limitations of claim 9. Thus, claim 9 is believed allowable and indication of such allowance is earnestly requested.

Claim 10

Claim 10 is dependent on and further limits claim 9. Since claim 9 is believed allowable, claim 10 is also believed allowable for at least the same reasons as claim 9.

CONCLUSION

In view of the forgoing remarks, it is respectfully submitted that the pending Application is now in condition for allowance and such action is respectfully requested. If any points remain at issue which the Examiner feels could best be resolved by a telephone interview, the Examiner is urged to contact the attorney below.


No fee is believed due with this Amendment, however, should a fee be required please charge Deposit Account 50-0510. Should any extensions of

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time be required, please consider this a petition thereof and charge Deposit Account 50-0510 the required fee.

Respectfully submitted,

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